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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/395,254	09/13/1999	RUBEN P. MADRID	TI-20922.1	5721

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EXAMINER

KOCH, GEORGE R

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 01/29/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/395,254

Applicant(s)

MADRID, RUBEN P.

Examiner

George R. Koch III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 6 and 21-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 6, and 21-22, 24-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claim 23, line 12, delete "[The wirefilm of claim 23]"

2. The above error appears to be a carry-over from the marking up process, and it appears that the applicant intended to delete this phrase, as applicants remarks and amendments indicate that claim 23 is being rewritten in independent form. The examiner's amendment was done to expedite the prosecution process.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10-23-2002 has been entered.

Priority

4. In the amendment filed 10-23-2002 (Paper No. 11) the cross reference to related applications includes a provisional application, which is claimed in the parent application. However, this provisional application is not claimed in the parent application. Furthermore, the parent application does not claim priority to any applications, provisional, non-provisional or foreign.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 2, 4, 6, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what a *stepable* wirefilm means, or how the phrase *stepable* distinguishes the wirefilm of the current invention to the prior art. There is no mention of a *stepable* wirefilm in the specification.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1, 2, 4, 6, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, and 33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification provides no support or recitation of a *stepable* wirefilm.

Claim Rejections - 35 USC § 102

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1-2 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Laakso et al. (USPN 4,650,545). Laakso et al. disclose a wirefilm comprising a substantially planarizable film and a plurality of wire strands, each wire strand coupled to the film according to the relative positions of a first component and a second component, the first end of each wire strand operable to contact a first bonding site and the second end of each wire strand operable to contact a second bonding site to electrically interconnect the first component and the second component, and at least a portion of each wire strand between the first end and the second end is fully embedded in the film (See Col. 1, lines 26 – 30, 59 – Col. 2, line 3, Col. 2, lines 31 - 37 and Figs. 1 and 4, items 10, 12, 14, 16, 20 and 24). A portion fully embedded has been interpreted

to mean any portion embedded. Laasko appears to be stepable, but it is not clear what stepable means (see 35 USC 112 rejections above).

Regarding claim 2, the film comprises a plastic polymer (See Col. 1, line 59).

Regarding claim 26, an electrical connection is disclosed that comprises a first component and a second component having first and second bonding sites, respectively, and a wirefilm comprising a substantially planarizable film and a plurality of wire strands, each wire strand coupled to the film according to the relative positions of a first component and a second component, the first end of each wire strand operable to contact a first bonding site and the second end of each wire strand operable to contact a second bonding site to electrically interconnect the first component and the second component, and at least a portion of each wire strand between the first end and the second end is embedded in the film (See Col. 1, lines 26 – 30, 59 – Col. 2, line 3, Col. 2, lines 31 - 37 and Figs. 1 and 4, items 10, 12, 14, 16, 20 and 24).

11. Claims 21-22, 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamasaki et al. (USPN 5,554,885). Yamasaki et al. discloses a wirefilm comprising a substantially planarizable film and a plurality of wire strands, each wire strand coupled to the film according to the relative positions of a first component and a second component, the first end of each wire strand operable to contact a first bonding site and the second end of each wire strand operable to contact a second bonding site to electrically interconnect the first component and the second component, and each wire strand comprising a loop portion relaxed and located entirely between the first end and

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the second end, the loop portion spaced apart from the film (See Col. 5, lines 21 - 30 Figs. 1 - 3, 9 -12, items 10, 20, 30, 32, 32, 34 and 40). Yamasaki appears to be stepable, but it is not clear what stepable means (see 35 USC 112 rejections above). Furthermore, Yamasaki appears to have the groups of wire strands as claimed in items 30a, 30b, 30c and 30d).

Regarding claim 29, an electrical connection is disclosed that comprises a first component and a second component having first and second bonding sites, respectively, and a wirefilm comprising a substantially planarizable film and a plurality of wire strands, each wire strand coupled to the film according to the relative positions of a first component and a second component, the first end of each wire strand operable to contact a first bonding site and the second end of each wire strand operable to contact a second bonding site to electrically interconnect the first component and the second component, and each wire strand comprising a loop portion relaxed and located entirely between the first end and the second end, the loop portion spaced apart from the film (See Col. 5, lines 21 - 30 Figs. 1 - 3, 9 -12, items 10, 20, 30, 32, 32, 34 and 40).

Regarding claims 22 and 30, the film comprises a plastic polymer (See Col. 5, lines 65-66).

Claim Rejections - 35 USC § 103

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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13. Claims 4 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laakso et al. as applied to claims 1 and 26 above, and further in view of Nakano et al. (USPN 4,857,671). Laakso et al. is silent to a means by which the wirefilm is coupled to the first and second component, but suggest any conventional techniques may be used (See Col. 2, lines 34-37). One in the art would appreciate an adhesive is a conventional means to couple wirefilms to first and second components, which provides a low pressure and temperature coupling means that prevents damage of the wirefilm, first and/or second components. It is well known and conventional to provide an adhesive layer that couples a wirefilm to first and second components as shown, for example, by Nakano et al. (See Col. 1, lines 13-17, 58-61, Col. 2, lines 36-41, Col. 3, lines 7-17, 35-38, Col. 4, lines 62-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize an adhesive layer in Laakso et al. that couples the wirefilm to the first and second component as shown by Nakano et al. in order to prevent damage to the wirefilm, first component and/or the second component.

14. Claims 24 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. as applied to claims 21 and 29 above, and further in view of Nakano et al. Yamasaki et al. suggests using high temperatures and pressures to couple the wirefilm to the first and second components, but is silent to an adhesive layer that couples the wirefilm to the components. One in the art would appreciate such high temperatures and pressures may damage the wirefilm and/or components. It is well known and conventional in the art to provide an adhesive layer that couples the wirefilm

to the first and second components and prevents damage to the wirefilm and components due to high temperatures and pressures as shown, for example, by Nakano et al. (See Col. 1, lines 13-17, 58-61, Col. 2, lines 36-41, Col. 3, lines 7-17, 35-38, Col. 4, lines 62-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize an adhesive layer in Yamasaki et al. that couples the wirefilm to the first and second component as shown by Nakano et al. in order to prevent damage to the wirefilm, first component and/or the second component.

15. Claims 6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laakso et al. as applied to claims 1 and 26 above, and further in view of Ettre et al. (USPN 3,655,496). Laakso et al. is silent to the wirefilm mounted on a continuous and automatic film tape carrier. One in the art would appreciate a film tape carrier used in automatic processes achieves a higher production rate than manual processes. It is well known and conventional to provide wirefilms on film tape carriers in automatic processes as shown, for example, by Ettre et al. (See Col. 5, line 40 – Col. 6, line 8, Col. 3, lines 21 – 33 and Figs. 1-2, items 10, 12, 14, 16, 18, 22, 24, 30, 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the wirefilm of Laakso et al. in the film tape carrier of Ettre et al. to continuously and automatically provide wirefilms to substrates, thus achieving higher production and efficiency than manual processes. It is noted, the film tape carrier of Ettre et al. is removable coupled to the wirefilm (See Fig. 2, items 22, 12 and 14).

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16. Claims 25 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamasaki et al. as applied to claims 21 and 29 above, and further in view of Ettre et al. Yamasaki et al. suggest a continuous film having wire strands coupled thereto, but is silent to a film tape carrier removably coupled to the film (See Col. 7, lines 11-24 and Fig. 5, items 10 and 70). One in the art would appreciate punching or cutting the wirefilm, i.e. portion of the film having wire strands coupled thereto, and components from the rest of the film in order to produce a wirefilm coupled to the first and second components (See Col. 1, lines 30-33, Col. 7, lines 40-42 and Figs. 5, 7-12, items 10, 70, 30, 32, 34, 40). Punching or cutting causes undue stress and may damage the wirefilms or components. One in the art would further appreciate that by providing a film tape carrier removably coupled to the film alleviates the need for punching or severing and therefore eliminates stress and damage of the wirefilm or components. It is well known and conventional in the art to provide a film tape carrier coupled to the film as shown, for example, Ettre et al. (See Col. 1, lines 18-20, Col. 5, line 40 – Col. 6, line 8, Col. 3, lines 21 – 33 and Figs. 1-2, items 10, 12, 14, 16, 18, 22, 24, 30, 36). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide Yamasaki et al. with a film tape carrier removably coupled to the film in order to eliminate stress and damage to the wirefilm or components caused by punching or cutting.

Response to Arguments

17. Applicant's arguments filed 12-23-2002 have been fully considered but they are not persuasive. Applicant argues that Laasko and Yamasaki do not disclose a stepable film, but it is not clear exactly what a stepable film entails. Furthermore, the phrase "at least a portion... being fully embedded" is not interpreted as distinguishing from "at least a portion... being embedded", since whatever portion is embedded can be characterized as being the portion "fully embedded". Furthermore, Yamasaki discloses the groups of wire strands (items 30a, 30b, etc) as claimed.

Allowable Subject Matter

18. Claim 23 is allowed.

19. The following is an examiner's statement of reasons for allowance: As noted in paper #8, the prior art made of record does not teach or suggest the combination of at least a portion of each wire strand between the first and second ends embedded in the film, and each wire strand comprising a loop portion relaxed and located entirely between the first and second ends and spaced apart from the film..

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

20. Claim 31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph and first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

21. The following is a statement of reasons for the indication of allowable subject matter: the prior art made of record does not teach or suggest the combination of at least a portion of each wire strand between the first and second ends embedded in the film, and each wire strand comprising a loop portion relaxed and located entirely between the first and second ends and spaced apart from the film.

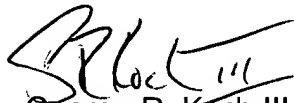
Conclusion

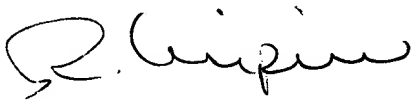
22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (703) 305-3435 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-800-877-8339 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


George R. Koch III
January 26, 2003


RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700